DOCKET NO. 03-0371

DIVISION OF CONSUMER ADVOCACY'S

RESPONSES TO THE

HREA'S REBUTTAL INFORMATION REQUESTS

The following are responses are sponsored by Joseph A. Herz, P. E. and were prepared by Mr. Herz on behalf of the Consumer Advocate.

HREA-CA-RT-1-IR-1. In the Table on page 11;
a. What is the basis for the DG size limits?

RESPONSE: The estimated range of values for the upper size limit of DG were provided by HECO and by KIUC (see for example, HECO response to CA-IR-1). The DG size limitations shown in the Table on page 11 of CA-RT-1 are intended to be primarily illustrative of the range of values for establishing the upper size limit of a generating facility to be considered as "small" for purposes of establishing whether the DG policies and framework resulting from this proceeding would be applicable to such a generating facility. The basis for the policy setting definition of "small" is provided on page 1 of exhibit CA-RT-100 (see item 1.A.2. of the DG matrix).

b. Why should there be specific limits as opposed to evaluating the merits of specific projects (over a certain threshold) on a case by case basis?

RESPONSE: Specific limits on small scale projects must be established in order to develop the policy decisions that will allow the installation of DG facilities in the State. As indicated on exhibit CA-RT-100, the policy setting definition of "small" is relative to utility system loads, the loads of large customers and the location of the DG application on the utility's grid. It is expected that the threshold size limitations, in terms of absolute MW amounts, may change over time as the utility's system loads, the loads of customers and the location of such loads and the DG application on the utility's grid change; the definition, however, should not change in order for the Commission to develop the policy setting rules and parameters that will enable the installation of DG facilities, primarily on customer sites or in locations that are in close proximity to the end-user's location.

HREA-CA-RT-1-IR-2. Reference your comments on page 12 (lines 20 to 21), the Commission stated, in order 20582 on the instant docket, that "distributed generation involves the use of small scale electric generating technologies installed at, or in close proximity to, the end-user's location." Would you agree that this could involve resources located on either side of the customer's utility meter, hence the resources could be supply-side and demand-side by the conventional definitions? Hence, would you agree that it would be too limiting to state that the "Commission's intent to focus on supply-side resources is clear?"

RESPONSE: Yes, it is agreed that DG could involve resources located on either side of the customer's meter. The witness does not consider the definition of an electric generating resource as supply-side or demand-side based on its location of the resource relative to the location of the customer's utility meter. Rather, the function of the resource (i.e., electric generating resource versus load reduction or load shifting resources) is the determining factor of whether the resource is a supply-side versus demand-side resource. The witness considers electric generating resources as supply-side resources, while demand-side resources are those resources which result in a reduction or shifting of a customer's load. The referenced Commission Order acknowledged that DG resource could include in the broadest sense, demand side management technologies. The Order goes on to state, however, that the focus of this docket is on small-scale electric generating technologies.

Thus, it is clear from a reading of Commission Order No. 20582 that the investigation in the instant proceeding does not include targeted end-use and demand-side management technologies.

HREA-CA-RT-1-IR-3. On page 14 (lines 4 to 6) are you not considering the County of Maui's proposal to utilize emergency/standby generators as part of the Virtual Power Plant concept? If so, please explain.

RESPONSE: As previously discussed in testimony and responses to discovery, the witness defines emergency/standby generator as that which only serves the customer's load during periods when the utility service to the customer is temporarily interrupted other then when the generator is tested. If the generators are limited to such use, then emergency/standby generators are not considered a DG unit for purposes of this proceeding. (See CA-T-1, page 10, lines 14 – 20 and CA-RT-1, page 13, line 19 through page 14, line 6.) If a generating unit is operated and used to serve load other than during periods of interruption and testing (as for instance in a Virtual Power Plant concept), then by the witness' definition, the generator ceases to be defined as emergency/standby generator and would then be defined as DG for purposes of the instant proceeding (provided that it meets other definitional and interconnection DG requirements).

HREA-CA-RT-1-IR-4. On page 14 (lines 15 to 17) HREA cannot speak for other Parties, but does the CA understand that the threshold issue from our perspective of this docket is to determine the appropriate role of the utility in the DG market, which is a much broader issue that just utility ownership?

RESPONSE: The referenced testimony is the witness' response to the question "What are the ownership issues that must be addressed in this proceeding?" under subpart 3 (Who should own and operate DG facilities?) of Section III (Critical Issues) of the witness' rebuttal testimony. The referenced testimony response focused on the concerns regarding utility ownership of customer-sited DG expressed by some parties in the documents filed in this proceeding. It is the witness' belief, based on his reading of the direct testimonies filed in this proceeding, that the utility ownership issue is the most critical question facing the Commission as part of its determination of the appropriate role of the utility in the DG market.

HREA-CA-RT-1-IR-5. On page 19 (lines 6 to 8) HREA cannot speak for other Parties, but does the CA understand that HREA is concerned not only with the creation of a level playing field, but also the potential impacts of DG implementation on ratepayers?

RESPONSE: This witness, from his reading of the direct testimonies filed in this proceeding, believes that HREA is recommending that the utility be limited to facilitating the implementation of DG (see for example, HREA-T-1, pages 11 – 13). This witness believes that HREA's "primary argument herein is that Hawaii cannot have a competitive market with a level playing field, if the utility is a direct participant" (see HREA-T-1, page 3, lines 11 – 12). The witness' reading of the direct testimony is that HREA believes that one of the challenges of implementing DG is the long-term consequences of the move to DG due to the potential for utility revenue losses; and that the utility rate structure must be redesigned to encourage DG and minimize negative rate impacts on other customers (see HREA-T-1, page 15, lines 14 – 25). The witness concurs with those concerns but also contends that if DG is successfully implemented, electric costs should be lower but in no event any greater, then otherwise would have occurred absent DG; and that reliability should be improved, not degraded because of DG implementation (see CA-RT-1, page 60, lines 15 – 18).

HREA-CA-RT-1-IR-6. On page 20 (lines 5 to 8) does the phrase "not unduly or unreasonably preferential, discriminatory or anti-competitive" include the goal that there should be no rate impacts to non-DG customers? If not, please explain.

RESPONSE: Yes, with the clarification that the "no rate impacts to non-DG customers" goal essentially means that rates would not be higher than otherwise would be the case absent utility participation. The witness contends that the utility's participation in the DG market should be subject to Commission approval and in a manner that is consistent with the utility's lowest reasonable cost IRP plan and implemented through a competitive process.

HREA-CA-RT-1-IR-7. On page 20 (lines 16 to 18) HREA would agree that KIUC is in a different situation than an investor-owned utility (IOU), and that the economics driving KIUC may be different than that of an IOU. However, it is not clear to us that the KIUC's decisions on behalf of their members will differ significantly with that of an IOU with respect to its shareholders. For example, KIUC has described the potential impacts of DG in terms of a "slower build up of equity, reduced margins and ultimately a reduction in patronage capital retirements to the members." Would you agree that the concern about patronage capital appears to be similar to potential impacts to the shareholders of an IOU? If not, please explain.

RESPONSE: While there is some similarity between the concern about patronage capital for KIUC's members to the potential impacts of the shareholders of an IOU, there is a significant distinction in that the customers and owners (i.e., shareholders) of an investor-owned utility are two distinct groups. In a cooperative such as KIUC, the customers and owners are essentially one and the same. KIUC's long-range planning should consider the build up of equity, margin and patronage capital retirement, as well as the current and future electric service needs of its owner/customers. On the other hand, the Commission's regulation of an investor-owned utility is that the IOU utility reliably meets the service obligations of its customers in a manner that represents its lowest reasonable cost plan. The investor-owned utility is then provided the opportunity to earn a reasonable return on its investment to meet those service obligations. The IOU's profit is used to attract investors that

provide the funds needed to finance capital projects to serve the utility customers. The investors of an IOU are not necessarily comprised of the customers served by the utility.

HREA-CA-RT-1-IR-8. On page 22 (line 20) to page 23 (line 2) regarding access to customer information, would you agree the utility: (i) has inherent knowledge of its customers and the overall utility system, and (ii) can investigate new technologies and marketing approaches at the expense of the ratepayer, where as a non-utility DG provider: (i) has to acquire the knowledge already resident at the utility, and (ii) pay for its marketing efforts, including the costs of establishing a presence in Hawaii with its own funds? Is not this an example of the utility's market power, and illustrates some of the barriers that third parties have to overcome? If you disagree, please explain. Note: also see page 44 (lines 8 to 10) in which the CA appears to agree that the utility has intimate knowledge of its T&D system.

RESPONSE: First, with respect to the inherent knowledge of a utility's customers and the overall utility system, the Consumer Advocate agrees that such information is available to the utility and that a third-party non-utility provider would have to acquire this information. Information regarding the customer use, however, is not privileged and accessible only to the utility as this information may be obtained directly from the customer. On the other hand, information regarding the overall utility system, is inherent to the utility, which is the basis for requiring the utility to incorporate analysis of potential sites and installation of DG in the development of the utility's IRP plan. These factors, however, are not examples of market power, especially if the utility is allowed to participate in the installation of DG through a non-regulated subsidiary.

HREA-CA-RT-1-IR-9. On page 23 (lines 19 to 21) please explain what options that the utility could provide that non-utility DG providers could not.

RESPONSE: The testimony reference indicates that the utility's participation provides customers with the option of having another provider of DG thus giving customers more vendor choices as to the type of DG to be installed on the customer premises (see also CA-RT-1, page 26, lines 3 – 7). Also, if the utility's involvement in the customer-sited DG market is as a regulated utility service, the Commission and other parties would have the opportunity to review the utility's proposal and determine if such installation is a cost-effective means of meeting customer energy needs in a manner that is not unduly discriminatory, preferential or anti-competitive (see for example CA-RT-1, page 26, line 12 through CA-RT-1, page 27, line 7).

HREA-CA-RT-1-IR-10. On pages 24 (lines 18 to 21) to page 25, HREA has recommended (as part of the approach whereby unregulated utility affiliates would be allowed to participate in the DG market) that there must be no cross-subsidization of the affiliate from the mother utility? In this section, the CA appears to imply that this would not be possible. Please explain.

RESPONSE: The implication of the referenced testimony does not provide that cross-subsidization from the affiliated utility would occur. Rather, the testimony was offered to indicate the Consumer Advocate's preference that a utility's participation in the customer-sited DG market should be as a regulated service rather than as an unregulated service to allow the Commission an opportunity to review the utility installed DG project. If the utility were allowed to install DG through an unregulated affiliate, the Commission would not have jurisdiction to review the installation, similar to the installations of third-party non-utility DG providers that are currently done. A number of examples of a utility offering service through a non-regulated entity in Hawaii is referenced in the testimony (see for example CA-RT-1, page 25, lines 6 –16).

As noted in the testimony, the concern for cross-subsidization exists whenever a utility provides service to a non-regulated entity using utility resources or when a

utility receives service from a non-regulated entity. In these situations, there are rules and reporting requirements that assist the Commission and the Consumer Advocate in determining whether cross-subsidization of the non-regulated operations by the regulated operations is occurring. With utility participation in the customer-sited DG market as a regulated utility service, the Commission would have the authority to ensure that the utility's involvement focused on reliability in a manner that is consistent with central utility lowest reasonable cost planning. This focus would contrast with an unregulated subsidiary's focus, which may be on cost and profit for specific DG projects. If offered as an unregulated utility service, there would be no requirement to seek Commission approval for the DG installation or for the rates to be charged for the output of the DG facility. As a regulated service, interested parties would have an opportunity to address concerns with the specific proposals of the utility.

HREA-CA-RT-1-IR-11. On page 26 (lines 12 to 20) the CA suggests that non-utility DG would not be reliable. If the utility wishes a specific DG to meet certain reliability and safety requirements, HREA supports including these requirements in DG interconnection agreements. HREA observes that this approach has worked well with Independent Power Producers (IPPs) that have provided reliable and safe power to the utility for many years. Please explain why you don't think this approach would work with DG?

RESPONSE: The approach could also work with DG once specific information is known about the type of facility to be installed, the size of the facility relative to the customer's load, and the operating parameters of the facility. The focus of this proceeding, however, is to develop the general policies and framework for the installation of DG in the State. Thus, the decisions that must be made by the Commission in the instant proceeding must be focused on general policy matters. Furthermore, as pointed out in direct testimony, there are differences in risk and/or benefits that relate to the utility versus non-utility ownership and operational features of the DG projects (see for example CA-T-1, page 69, line 5 through page 71, line 2). The risk associated with ownership and operation of generating facilities is related to the vested interest of the owner and/or operator of the generating facility. Electric utilities are subject to regulatory oversight and review in meeting their service obligations in a reliable manner at fair, reasonable rates that are not unduly

discriminatory. As recommended by the Consumer Advocate, if consideration of DG were incorporated in the development of the utility's IRP, interested parties would generally have the opportunity to voice their concerns and have such concerns addressed regarding a regulated utility's plans, rates and charges. On the other hand, non-regulated DG providers are not subject to the same regulatory oversight by the Commission and do not have the same regulatory obligations to provide reliable service for non-DG customers at a reasonable cost. Thus, non-regulated DG participants tend to focus more on the cost and profit for specific DG projects and the benefits these projects provide for the DG customers. These differences between utility regulated and non-regulated entities and services could result in different risk associated with the manner in which the DG facility is operated and maintained which in turn impacts on the reliability and benefits of specific DG facilities. As suggested in the question, these risk differentials between regulated utility versus non-regulated ownership and operation of DG facilities are often addressed in the IPP contractual arrangements that provide performance incentives/disincentives intended to insure the reliable performance of the non-regulated entity's operation

and maintenance of the DG unit. As noted in the question, this approach has worked with IPPs that have provided reliable and safe power to the utility in the past. However, these contractual and performance incentives/disincentives are not included or part of HECO's existing interconnection standards and agreements. Rather, the interconnection standards and agreements address the connection of a DG facility to the utility grid in a manner that will not adversely impact electric service quality, safety and reliability whether the unregulated entity operates and maintains the DG facility to utility standards or not. These interconnection standards and agreements do not address the risks associated with non-regulated owners/operators, and do not have the contractual and performance incentives/disincentives provisions found in the IPP arrangements. In other words, the approach suggested in the question could work provided that the non-regulated DG owner and operator enters into a contractual arrangement with the utility that includes the performance incentives/disincentives found in the IPP arrangements.

HREA-CA-RT-1-IR-12. As a follow-up to HREA-CA-RT-1-IR-11, is the CA suggesting that the utility be the only one to provide Customer-sited DG? Please explain.

RESPONSE: No, there should not be a restriction on who may own and operate DG projects. It is important, however, to recognize the differences in risk and/or benefits that relate to the owner and operator of DG projects (see for example CA-T-1, page 69, line 3 through page 77, line 2).

HREA-CA-RT-1-IR-13. On page 29 (lines 1 to 30) HREA shares the general concern regarding cross-subsidization of utility-owned (as well as non-utility-owned) customer-sited DG by non-DG utility customers. However, HREA observes that there is already inter-rate class subsidization, e.g., on Oahu, Schedule R, H and F customers are subsidized by Schedule G, J and P. HREA believes this existing cross-subsidization may be a bigger problem, as the current market is not getting the correct price signal. Should not we fix this problem first? If not, please explain.

RESPONSE: The currently bundled rates with the existing cross-subsidization is a matter that needs to be addressed and dealt with for the effective deployment of DG. The amount and the pace at which inter and intra class subsidies are eliminated is a matter that will need to be addressed in future rate proceedings when the impacts of the elimination can be assessed on the respective customer class(es). As a practical matter, it may not be possible to completely eliminate all subsidizations for social policy considerations. Furthermore, it may not be possible to eliminate all subsidies in one proceeding due to the impact the elimination would have on the respective customer class and the ability of the customers in that class to withstand the rate increases resulting from such elimination. In any event, the effective deployment of DG should not be tied to or held hostage to the elimination of inter and intra class subsidization. Rather, implementation of DG should proceed and include rate

structuring changes that provide for better price signals and avoid adverse impact on non-DG customers.

HREA-CA-RT-1-IR-14. On page 38 (lines 3 to 5) the CA has indicated a potential breakout for the unbundled rate components. Will the potential charges incurred by the DG facility be off-set, in part, by system benefits provided by the DG owner? For example, if the DG facility is non-utility, the facility will be providing capacity to the system.

RESPONSE: The testimony also references capacity and dispatch control credits, depending on the type of DG resource and its ability to serve loads when needed by the utility, and a locational credit that could be recognized for non-utility DG facilities (see CA-RT-1, page 38, lines 6 – 12 and exhibit CA-RT-101).

HREA-CA-RT-1-IR-15. On page 41 (lines 8 to 17) is the CA suggesting that implementation of DG should wait until the need for unbundling of rates has been determined and implemented? Please explain.

RESPONSE: No, the implementation of DG should occur as expeditiously as possible. The level of effort and detail for the cost of service analysis and the unbundling of rates should be balanced with the information available, the cost of developing additional data and the magnitude of the DG market and its impact on the utility's revenue recovery and revenue stability (see CA-RT-1, page 36, lines 10 – 18 and exhibit CA-RT-100, page 8 of the DG matrix).

HREA-CA-RT-1-IR-16. On page 44 (lines 8 to 15) and referring back to HREA-CA-RT-1-IR-8 (above), HREA would agree that the utility should identify DG needs in the IRP process, and release this information to potential third-party vendors. However, if the utility were allowed to participate directly as a DG provider, the utility would, by virtue of conducting the IRP analysis, possess early knowledge of the desired DG. HREA does not see how this would not give the utility a market advantage. Does the CA agree? Please explain.

RESPONSE: It is anticipated that these concerns will be alleviated with the Consumer Advocate's recommendations including the three described below.

First, the information relied upon to develop the utility's IRP must be shared early in the process with all interested parties. Interested stakeholders should be allowed to participate in the IRP process and have access to information, analysis and results as the utility is developing its IRP plan. There should be a specific T&D analysis using load flow programs to identify areas on the utility system that can be benefited from the installation of DG facilities. In summary, the IRP plan should include information that not only identifies the benefits of DG, but also the geographic locations at which DG would be of greatest value to all parties (see CA-RT-1, page 50, line 18 through page 51, line 6).

Second, the Consumer Advocate recommends that the utility's implementation of cost effective, customer-sited

DG identified in the utility's IRP should be done through a competitive process (see CA-RT-1, page 46, line 1 through page 51, line 9). This offers potential third party vendors an opportunity to compete for the installation of the facility in a manner that is intended to result in the alternative lowest reasonable cost option for the potential DG installations.

Third, the Consumer Advocate recommends that the Commission require utilities to submit for Commission review and approval, applications to install customer-sited DG (see for example CA-RT-1, page 56, line 21 through page 57, line 2). These recommendations provide the opportunity for potential third party vendors to express their specific concerns to the Commission during the IRP process, the competitive procurement process and the processing of the utility's application submittal to install DG. If improvements, changes or modifications are required so as to not give the utility a preferential or anti-competitive advantage over potential third party vendors, then such changes can be addressed and implemented by the Commission so as to insure a level playing field.

HREA-CA-RT-1-IR-17. On page 47 (lines 7 to 15) HREA believes there is only one application that the utility is proposing for DG to support directly its other generating facilities, and that would be a DG at one of the utility's sub-stations. Does the CA believe that is a case where the "competitive procurement process will be extremely important in assuring that all generation, including DG, is implemented within the framework of a lowest, reasonable cost IRP?" If so, is the CA suggesting, for example, that sub-station DG become part of Docket No. 03-0372, Competitive Bidding on New Generation?" Please explain.

RESPONSE: Before addressing the question, the Consumer Advocate disagrees that the installation of substation-sited DG is the only application utility DG to support its other generating facilities. Customer-sited DG could also be utilized by the utility to support its other supply-side resources. With respect to the question raised, the Consumer Advocate believes that the competitive procurement process will be extremely important in assuring that all generation, including DG, is implemented within the framework of a lowest reasonable cost IPR. As to the specifics of the process, the Consumer Advocate is in the process of reviewing information and developing its position on the issues set forth for the Competitive Bidding Docket. The competitive procurement process could include the opportunity of third party vendors to participate in the offering of the DG equipment, installation, and even some DG operation and maintenance services for substation-sited DG. The specifics

of the Consumer Advocate's position in the competitive bidding are being considered and have not been fully developed at this time.

HREA-CA-RT-1-IR-18. On page 48 (lines 10 to 12) HREA does not believe the current approach in IRP will result in the lowest, reasonable costs for providing reliable service, because: (i) the installation and operating costs of resource options are estimates prepared by the utility with input from consultants and IRP advisors, and (ii) the estimates generally are based on the cost for the utility to provide the resource, as opposed to comparing costs for alternative approaches to implementation. HREA believes a better approach would be to acquire costs based on solicitation and review of competitive bids, and, then finalize the 5-year action plan based on lowest-cost acceptable bids. Does the CA agree? Please explain.

RESPONSE: The concerns raised are legitimate concerns that should be considered by the Commission in order for the IRP process to be most beneficial to the utility and its customers. The approach suggested in the question is an option that could be considered for incorporating a competitive procurement process as part of the development and implementation of the IRP plan. It is the Consumer Advocate's understanding, however, that the most common practice of utilizing the competitive procurement process is in the implementation stage of an IRP plan. Under the more common approach, system needs are defined and a lowest reasonable cost IRP plan is developed for meeting such needs. The IRP process generally uses generic cost information for DG resources and technology. Of course the IRP process includes input from various stakeholders as well as Commission review and approval. Following the development of the utility's

lowest reasonable cost plan, the competitive procurement process is then utilized for purposes of implementing the utility's IRP plan for the additional generating resources identified in the IRP plan, especially those resources that are identified as being needed within the initial 5-years of the 20-year planning period, (i.e., the Action Plan). The rate and timing of the competitive process in conjunction with the utility's IRP plan is expected to be addressed in the Competitive Bidding proceeding.

HREA-CA-RT-1-IR-19. On page 51 (lines 15 to 18) did the "approved interconnection standards and agreements" developed via voluntary consensus process with input and participation from industry and other non-utility, non-CA parties, as was the IEEE-1547 standard? If not, please explain.

RESPONSE: The Consumer Advocate is unable to respond to this information request because the Consumer Advocate was not involved in developing the standards that were submitted for Commission review and approval. The Consumer Advocate was provided an opportunity to review the documents submitted to the Commission, provide recommendations for modification to the documents, and discuss the recommendations with the utility. Whether the utility also consulted other parties is not known to the Consumer Advocate. Interested parties had an opportunity to have input if they were not previously consulted prior to the submission to the Commission through a motion seeking intervention or participation in the specific docket.

HREA-CA-RT-1-IR-20. On page 53 (lines 16 to 18) as part of the implementation process, does the CA support the development of a concise DG interconnection agreement (s), patterned in part after the utility's two-page, net metering agreement?

RESPONSE: The Consumer Advocate is in support of anything that would simplify the interconnection agreement provided that safety, power quality and reliability are not compromised for the sake of brevity. Experience of interconnection agreements in other states indicate that HECO's interconnection standards and agreements are not unduly lengthy. As a practical matter, it may not be possible to reduce the interconnection standards and agreements down to two pages, especially if the size of the DG facilities is greater than 10 kws, for which the net metering agreements was intended to cover. As more experience and input is realized with regard to the utility's interconnection standards and agreements, improvements and enhancements including the possibility of simplification of such documents may be achievable.

HREA-CA-RT-1-IR-21. On page 52, does the CA really believe there is no need to improve the utility's current interconnection agreements? For example, should not stand-by rates (where deemed appropriate, but which need further assessment) be included in the interconnection agreements? Please explain.

RESPONSE: The Consumer Advocate recommends that the Commission's DG policy decisions in this proceeding include directions that interconnection standards and agreements be periodically reviewed and updated, particularly to address some of the items addressed by Hess in its direct testimonies (see CA-RT-1, page 54, lines 5 – 11). It is not recommended, however, that standby rates be included in the interconnection agreements. The subject matter and underlying facts, analysis and information for assessing, evaluating, modifying and improving interconnection agreements and standards is very different than that required to develop standby rates. In general, the interconnection standards take into account design, operating and technology specific requirements involving protection, synchronizing and control equipment. The information required and the evaluation of interconnection requirements would not include the utility operational, financial and planning information that would be needed for purposes of reviewing and evaluating a utility's standby rates or its unbundled cost of service. By the same token, the

best time to evaluate a utility's standby rates and unbundle the cost of service is in the context of the utility's rate case. But, the utility's rate case does not include the information required to evaluate a utility's interconnection standards.

HREA-CA-RT-1-IR-22. Does the CA agree with Mr. Bill Bonnet's statement, on pages 11 and 12 of his rebuttal testimony (HECO-RT-6), that HECO's and the CA's are positions "aligned, or at least not in conflict, with respect to the issues in this proceeding?"

RESPONSE: Yes.